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EXAMINER

SINGH, SATWANT K

ART UNIT PAPER NUMBER

2626

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/725,837

Applicant(s)

HARRINGTON, STEVEN J.

Examiner

Satwant K. Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 5 is objected to because of the following informalities: the word "and" should be "an". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6-11, 14, 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hilliard et al. (US 6,654,493).
4. Regarding Claim 1, Hilliard et al disclose a color calibration apparatus useful in an image rendering device, the apparatus comprising: a sensor device operative to detect color of a test image to obtain at least one measured color value (Fig. 1, Step 16, capture at least one image (by the image device to be calibrated) generating a captured image) (col. 3, lines 52-54); a memory device having stored therein at least one ideal color value (Fig. 1, step 14, display at least one reference image on the calibrated display generating a calibrated reference image with known colorimetric properties) (col. 6, lines 44-51); a comparing device operative to compare the at least one measured color value to

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the at least one ideal color value (Fig. 1, step 18, compare the captured image with the known colorimetric properties of the calibrated reference images) (col. 3, lines 54-57); a latching device operative to selectively latch an output of the comparing device (Fig. 1, step 20, compute a relationship between the captured images and the known colorimetric properties of the calibrated reference image (col. 3, lines 56-57); and, a display device operative to display the latched output (end user uses the display device 44 to calibrate an image capture device 42) (col. 7, lines 34-43). The limitation that the application is a calibration alarm is not being considered since an alarm is not recited anywhere else in the claims.

5. Regarding Claim 2, Hilliard et al disclose an apparatus wherein the sensor device comprised a plurality of sensors, each corresponding to a separate color (color image capture devices may have as few as one channel, usually called black and white or monochrome system, or more than the usual three, "red", "green", and "blue" channels or signal paths) (col. 3, lines 38-43),

6. Regarding Claim 3, Hilliard et al disclose an apparatus wherein the memory device comprises a plurality of set point memory modules, each module having stored therein one of a separate ideal color value and a range of the separate ideal color values (on images that are displayed on the calibrated display are RGB and are redundant colors) (col. 4, lines 52-62) (the calibrated reference image is a display of known colorimetric properties and can also be referred to as a color test pattern) (col. 4, lines 39-62).

7. Regarding Claim 6, Hilliard et al disclose an apparatus wherein the latching device latches the output of the comparing device when a measure

signal is present ((Fig. 1, step 20, a relationship is computed between the captured images and the calibrated reference images).

8. Regarding Claim 7, Hilliard et al disclose an apparatus wherein the measure signal is generated based on detection of a test pattern (relationship is made between the captured images and the colorimetry of the calibrated reference images (color test pattern)) (col. 6, lines 42-53).

9. Regarding Claim 8, Hilliard et al disclose an apparatus comprising a pattern detection logic module having sensor connected thereto which are operative to detect the test pattern (relationship is made between the captured images red, green and blue digital values with the known colors displayed on the calibrated reference profiles) (col. 6, lines 42-53).

10. Regarding Claim 9, Hilliard et al disclose an apparatus wherein the at least one ideal color value is selectively captured (selection of colors or spectral radiances in the reference images, which must be displayed so as to correctly simulate the light source illuminating the scene or object or areas being image captured) (col. 5, lines 20-67).

11. Regarding Claim 10, Hilliard et al disclose an apparatus comprising a sensor operative to selectively capture the at least one ideal color value based on a capture signal generated by the image rendering device after the image rendering device is calibrated (take from the correction image, the stored digital data for each color area and use it to create a characterization or calibration profile for later use) (col. 6, lines 51-64).

12. Claims 11 and 19 are rejected for the same reason as claim 1.

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13. Regarding Claim 14, Hilliard et al disclose a method wherein the ideal color values are obtained by: calibrating the device (Fig. 1, Step 12, calibrate/characterize a display device generating a calibrated display) (col. 3, lines 63-66); and measuring the values of colors produced by the calibrated device (Fig. 1, Step 14, display at least one reference image on the calibrated display generating a calibrated reference image with known colorimetric properties) (col. 4, lines 39-51).

14. Claim 16 is rejected for the same reason as claim 6.

15. Claim 17 is rejected for the same reason as claim 7.

16. Claim 18 is rejected for the same reason as claim 8.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilliard in view of Capello et al. (US 4,876,726).

19. Regarding Claim 4, Hilliard et al fail to teach an apparatus wherein the comparing device comprises a plurality of comparators, outputs of which are input to combining logic.

Capello et al teach a data enhancement apparatus wherein the output of a plurality of comparators is input to an OR gate, the output of which is sent to a latch (Fig 55, Items 1001, 1002, 1004).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilliard by the teaching of Capello to use a plurality of comparators as the input to an OR gate to compare the ideal color values to the measured color values.

20. Regarding Claim 5, Hilliard et al fail to teach an apparatus wherein the combining logic is an OR gate.

Capello et al teach a data enhancement apparatus wherein the output of a plurality of comparators is input to an OR gate the output of which is sent to a latch (Fig 55, Items 1001, 1002, 1004).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilliard by the teaching of Capello to use a plurality of comparators as the input to an OR gate to compare the ideal color values to the measured color values.

21. Claims 13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilliard in view of Motamed (US 6,327,047).

22. Regarding Claim 13, Hilliard et al fail to teach a method further comprising the generating of a test pattern comprising one of a bar code and a predetermined sequence of colors.

Motamed teaches a method where the interpretable data on the special printer calibration target can be embedded in a barcode using barcode technology (col. 4, lines 30-39).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilliard by the teaching of Motamed to embed the color test patterns with a barcode for ease in calibration of the image rendering device without any additional effort by the user.

23. Regarding Claim 15, Hilliard et al teach a method wherein the test images are composed of a detectable test pattern (color test pattern) (col. 4, lines 60-62).

Hilliard et al fail to teach a method wherein the test images are composed of test color patches.

Motamed teaches a method where the calibration test strips are composed of test color patches (Fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hilliard by the teaching of Motamed to use test images composed of test color patches to provide additional options for calibrating the image rendering device.

24. Claim 20 is rejected for the same reason as claim 15

***Allowable Subject Matter***

25. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satwant K. Singh whose telephone number is (703) 306-3430. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Satwant Singh*

sks

Satwant K. Singh  
Examiner  
Art Unit 2626

MARK WALLERSON  
PRIMARY EXAMINER